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Mazdoor Kisan Shakti Sangathan

“The Right to Information, The Right to Live”

**“पुराने को छोड़ नये के तरफ”**

Jawaharlal Nehru

“Step Out From the Old to the New”

IS 12472 (1988): Connecting dimensions, fits and dimensions combinations of hands for clocks [PGD 23: Horology]

**“ज्ञान से एक नये भारत का निर्माण”**

Satyanaaran Gangaram Pitroda

“Invent a New India Using Knowledge”



**“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”**

Bhartṛhari—Nītiśatakam

“Knowledge is such a treasure which cannot be stolen”





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## CONNECTING DIMENSIONS, FITS AND DIMENSION COMBINATIONS OF HANDS FOR CLOCK

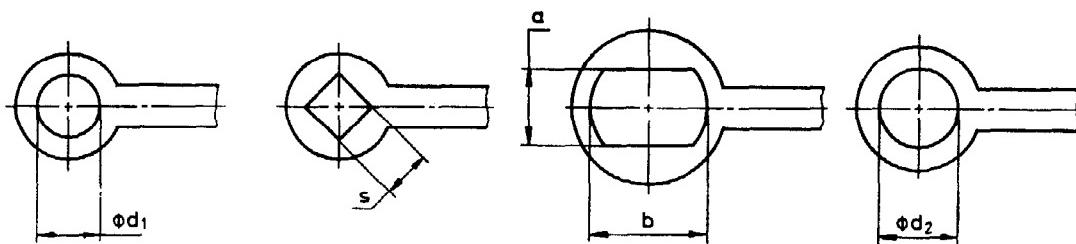
**1. Scope** — Covers the connecting dimensions, fits and dimension combinations of hands for clocks.

**2. Hole in Hands**

**2.1** Dimensions given in the table are connecting dimensions to hand spindles and hour sleeves.

**2.2** For hands with bushings, the bushings shall conform to IS : 12477-1988 'Bushing for hands for clocks'.

**2.3** If the minute of second spindle is threaded, the value of  $d_1$  and  $b$  shall be taken as thread dimensions.



All dimensions in millimetres.

$d_1$ U8	$s$ $+0.03$	$a$ $+0.03$	$b$ $+0.04$ $+0.01$	$d_2$ U8
0.8				1.6
1				2
1.2	1.2	2.2		2.5
1.6	1.5	2.5		3
2				
2.5				
3				
3.5	1.8	2.5	3.5	3.5
4	2	2.5		4
	2.2	2.8		4.5
				5
				5.5
				6
5.5				7
				8

**2.3.1 Fit between hole in hand and hand spindle shall be as given below:**

Deviations in  $\mu\text{m}$ 

<b>Tolerance Zone</b>	<b>Range of Diameters</b>		
	<b>Up to 3 mm</b>	<b>Over 3 Up to 6 mm</b>	<b>Over 6 Up to 10 mm</b>
<b>U8</b>	-18	-23	-28
	-32	-41	-50
<b>h8</b>	0	0	0
	-14	-18	-22

### **3. Recommended Combination of Holes**

**3.1 Combinations of minute hand ( round hole ) with hour hand ( round hole ) shall be:**

<b>Minute Hand <math>d_1</math></b>	<b>Hour Hand <math>d_2</math></b>
1.8	2
1.6	3
2	4
3	5.5
4	6
5.5	8

**3.2 Combinations of minute hand ( square hole ) with hour hand ( round hole ) shall be:**

<b>Minute Hand <math>s</math></b>	<b>Hour Hand <math>d_2</math></b>
1.5	4
1.8	4.5
2	5

**3.3 Combinations of second hand ( round hole ) with minute hand ( elongated hole ) and hour hand ( round hole ) shall be:**

<b>Second Hand <math>d_1</math></b>	<b>Minute Hand</b>		<b>Hour Hand <math>d_2</math></b>
	<b>a</b>	<b>b</b>	
—	2.2		
0.8	2.5		4.5
—	2.5	3.5	4.5
1	2.8		5
			5

**3.4 Combinations of second hand (round hole) with minute hand (round hole) and hour hand (round hole) shall be:**

<b>Second Hand <math>d_1</math></b>	<b>Minute Hand <math>d_1</math></b>	<b>Hour Hand <math>d_2</math></b>
0·8	2	4
1·2	3	4·5
2	4	6
3	5·5	8

#### **EXPLANATORY NOTE**

This standard is one of a series of Indian Standards relating to clocks. This standard specifies a series of preferred dimensions for the holes of clock hands with a view to achieve type reduction for the benefit of both manufacturers and purchasers. This standard will also make repair work easier.

In the preparation of this standard, assistance has been derived from the following:

IS : 1076-1967 Preferred numbers

DIN 8270 Blatt 1-1966 Hands for clocks; Connecting dimensions, fits, dimension combinations,  
Deutsches Institut Für Normung